



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. BOX 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10 031,314	01 15 2002	Carl Trevor Ross Pulford	DN1999176USA	5919

7590 06 10 2003

The Goodyear Tire & Rubber Company  
Patent & Trademark Department D 823  
1144 East Market Street  
Akron, OH 44316-0001

EXAMINER

TSOY, ELENA

ART UNIT	PAPER NUMBER
----------	--------------

1762

DATE MAILED: 06.10.2003

21

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/031,314

Applicant(s)

PULFORD ET AL.

Examiner

Elena Tsoy

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133)
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f):  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for further information.

Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited, PTO 850

*Specification*

1. The disclosure is objected to because of the following informalities: page 4, line 30, "dependant" should be changed to -- dependent --.

*Claim Objections*

2. Claim 4 is objected to because of the following informalities: claim 4, line 3, "thickness'" is advised to be changed to "thickness".

*Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1-4, 6-8** are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0795397.

As to claims 1-4, 6, 7, EP 0795397 discloses a method of producing an ultra fast curing rubber (elastomeric) article (See page 2, lines 41-46) comprising a) preparing two non-productive rubber compounds from the same rubber composition (See page 2, lines 45-46), wherein each non-productive rubber compound is prepared with co-active curatives such as typical vulcanizing agents (e.g. elemental sulfur, amine disulfides, polymeric polysulfides, etc.) in an amount 0.2-8 phr, zinc oxide in an amount 1-5 phr (See page 2, line 58) and accelerators (See page 3, lines 1-8); b) layering the non-productive rubber compounds in alternating layers so that a sulfur vulcanizing agent is located between the layers of the non-productive

layered rubber compounds to form the rubber article (See Fig. 2; page 3, lines 4-24). The rubber

layers may be of the same thickness or the layers may be of different thickness within a range of 0.01-0.15 mm (See page 2, lines 33-34). It is the Examiner's position that the layered rubber compounds would achieve 90 % cure at 120°C in less than 30 minutes, since the specification as filed discloses that the layered rubber compounds with a layer thickness of 0.1 mm, made from the same rubber composition and having the same curatives in the same amount, achieve 90 % cure at 120°C in 15 minutes (See specification, page 12, lines 13-14; Table 1).

As to claim 8, the sulfur vulcanizing agent migrates into the adjacent layer upon cure temperature (See page 3, lines 9-10), i.e. converts into diffusible state at elevated temperature.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0795397.

EP 0795397, as applied above, fails to teach that the two non-productive rubber compounds can be stored for a period of time prior to layering.

Since EP 0795397 teaches that co-acting curatives are separated in adjacent layers so that the layered rubber compounds cure only upon contact when the sulfur compounds are cured, it would be obvious to one of ordinary skill in the art at the time the invention was made to have stored two non-productive rubber compounds in a process of EP 0795397 for a period of time prior to layering.

7. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0795397 in view of Nadeau, Jr. et al (US 4,556,382).

EP 0795397, as applied above, further teaches that the layered rubber compounds can be used for making treads for pneumatic tires (See page 2, lines 6-7). However, EP 0795397 fails to teach that in a method of making the pneumatic tires, the layered compounds are applied to the surface of the tires prior to curing.

Nadeau, Jr. et al teach that in the fabrication of pneumatic tires it is well known to bond a tread to the tire body by curing a green tread extrudate applied onto the tire body (See column 1, lines 13-17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied layered rubber compounds to a body of pneumatic tires in EP 0795397 prior to curing with the expectation of providing the desired bonding of a tire tread to the tire body, as taught by Nadeau, Jr. et al.

### *Conclusion*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is (703) 605-1171. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

primary contact is (703) 605-1171. For After Final communications, please contact the examiner at (703) 605-1171. For all other communications and (703) 872-9311 for After Final communications.

Application/Control Number: 10/031,314

Page 5

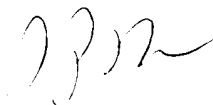
Art Unit: 1762

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Elena Tsoy  
Examiner  
Art Unit 1762

June 6, 2003



SHRIVE P. BECK  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700